

JAN 19 2023

A BILL FOR AN ACT

RELATING TO WASTEWATER SYSTEMS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that cesspools are
2 contaminating the State's ground water, streams, drinking water,
3 and coastal ecosystems. Maintaining the cleanliness of the
4 State's waters is a matter of statewide concern that falls under
5 the legislature's power to enact laws pursuant to article X,
6 section 6, of the Hawaii State Constitution. To address the
7 State's cesspool pollution, Act 125, Session Laws of Hawaii
8 2017, required all cesspools to be upgraded or converted to a
9 septic system or aerobic treatment unit system, or connected to
10 a sewerage system before January 1, 2050, and directed the
11 department of health to develop a system to prioritize their
12 upgrade, conversion, or connection based on their impact on
13 public health. Additionally, Act 132, Session Laws of Hawaii
14 2018, established the cesspool conversion working group to
15 develop a long-range, comprehensive plan for conversion of
16 cesspools statewide by 2050 and commissioned a statewide study
17 of sewage contamination in nearshore marine areas to further



1 supplement studies and reports conducted by the department of
2 health on cesspools. The cesspool conversion working group's
3 2021 Hawaii cesspool hazard assessment and prioritization tool
4 report identified three prioritization categories: priority
5 levels 1, 2, and 3. Priority level 1 includes areas in the
6 State where cesspools pose the greatest contamination hazard;
7 priority level 2 includes areas where cesspools pose a
8 significant contamination hazard; and priority level 3 includes
9 areas where cesspools have a pronounced contamination hazard.

10 The 2021 Hawaii cesspool hazard assessment and
11 prioritization tool report also noted that the geographic
12 coverage of their evaluation only extended across the four main
13 Hawaiian Islands. It further noted that even though the islands
14 of Molokai, Lanai, and Niihau were also impacted by cesspool
15 concerns, these islands were not included in several key
16 datasets necessary to its analysis. Thus, the authors of the
17 2021 Hawaii cesspool hazard assessment and prioritization tool
18 report recommended that a ranking system for these islands also
19 be established.

20 The legislature further finds that the following
21 communities were labeled as priority level 1 areas by the 2021



1 Hawaii cesspool hazard assessment and prioritization tool
2 report: Haleiwa, Waimanalo Beach-Homesteads, Hauula-Kaaawa,
3 Makua Valley, Judd Hillside-Lowery Avenue, Waimea-Kahuku, Laie,
4 Kawaiiloa, Campbell High School, Kaena Point, Kalaheo Avenue,
5 Waianae Kai, and Nanakuli on Oahu; Halama, Kamaole, Kahoma,
6 Keawakapu, Kapalua, Launiupoko, and Spreckelsville on Maui;
7 Holualoa, Kailua, and Kawaihae-Waikoloa on Hawaii; and Haena-
8 Hanalei, Kekaha-Waimea, and Wailua Homesteads on Kauai. In
9 these areas where homes are not connected to waste management
10 systems or are too remote to be connected to existing
11 infrastructure, new waste management technologies and solutions
12 are necessary to transition away from environmentally hazardous
13 cesspools.

14 The legislature additionally finds that, according to
15 recent shoreline erosion management plans, south Molokai has the
16 highest concentration of Hawaiian homestead residential lots
17 located directly on the coast, with approximately fifty lots
18 within two and a half miles of discontinuous shoreline. For
19 Molokai as a whole, the Molokai Health Center reports that forty
20 per cent of the population relies on subsistence farming,
21 hunting, and fishing, which means that having a clean and



1 healthy reef and nearshore environment is crucial for the health
2 of the community, especially the Native Hawaiian community. The
3 coastal plain of south Molokai is underlain by underground
4 rivers of fresh water flowing mauka to makai that affect the
5 fringing reef, an important food source for Molokai Native
6 Hawaiians. A United States Geological Survey report concluded
7 that further inquiry into the range of nutrient sources to
8 groundwater and nutrient concentrations reaching the coast in
9 groundwater discharge will aid in future planning and resource
10 management. Molokai coastal homesteaders will be financially
11 challenged to convert from cesspools to more modern individual
12 wastewater systems, as the median annual household income
13 averaged over the three department of Hawaiian home lands
14 coastal communities was \$42,396 in 2019, according to the
15 American Community Survey of 2019.

16 The legislature additionally finds that new wastewater
17 management solutions could greatly improve public health.
18 Technologies that are reaching a commercial scale for the first
19 time include solutions for individual homes, as well as multi-
20 unit dwellings, apartment buildings, and entire communities.
21 Large wastewater management systems can remove sewage from



1 multi-unit dwellings and apartment buildings. At the municipal
2 scale, these technologies can effectively treat sewage from
3 entire communities for a small fraction of the cost of existing
4 technology now employed in Hawaii. Self-contained, self-
5 powered, and self-cleaning toilets can be used in homes that do
6 not have the capacity to connect to the existing sewer
7 infrastructure. For example, the Puu Opaе Kuleana Homestead
8 Settlement Plan, which will offer two hundred fifty homestead
9 lots in Waimea, Kauai, does not include a centralized wastewater
10 service or public water system, and the nearest wastewater
11 treatment plant is over four miles away and thus could benefit
12 from new waste management solutions. The Anahola Kuleana
13 Homestead Settlement Plan, which will offer one hundred fifteen
14 homestead lots in Kawaihau, Kauai will similarly benefit from
15 new waste management solutions.

16 The Legislature further finds that on an annual basis,
17 approximately one thousand individual wastewater system
18 applications are processed and reviewed. There are
19 approximately eighty-two thousand cesspools that will be
20 required to be upgraded or converted to an approved wastewater
21 system or connected to a sewer system by 2050 pursuant to Act



1 125, Session Laws of Hawaii 2017. It is projected that
2 individual wastewater system applications may increase up to an
3 additional three thousand to five thousand applications per year
4 to meet this mandate. Accordingly, the purpose of this Act is
5 to:

- 6 (1) Establish and appropriate funds to implement a three-
7 year new waste management solution and cesspool system
8 demonstration pilot program within the University of
9 Hawaii water resources research center to review,
10 examine, and demonstrate new wastewater and cesspool
11 technology systems; implement those technologies in
12 cesspool system demonstration projects; and establish
13 a ranking system similar to the Hawaii cesspool
14 prioritization tool for the islands of Molokai, Lanai,
15 and Niihau; and
- 16 (2) Appropriate funds for two full-time equivalent (2.0
17 FTE) positions within the department of health's
18 wastewater branch.

19 SECTION 2. (a) There is established a three-year new
20 waste management solution and cesspool system demonstration



1 pilot program within the University of Hawaii water resources
2 research center.

3 (b) The University of Hawaii water resources research
4 center shall:

- 5 (1) Examine and demonstrate new wastewater and cesspool
6 technology systems, ranging from individual toilets to
7 significantly larger multi-unit systems and options
8 for community scale solutions as appropriate, as well
9 as review and evaluate the affordability, feasibility,
10 and efficiency of the treatment technologies;
- 11 (2) Administer not less than four cesspool system
12 demonstration projects implementing new toilet and
13 sewage treatment technologies; provided that each
14 project shall include a cesspool in an area designated
15 as a priority level 1 by the cesspool conversion
16 working group's prioritization tool report; provided
17 further that there shall be not less than one project
18 in each county; provided further that there shall be
19 not less than one project on the island of Molokai;



1 (3) Document, validate, and summarize the various tests,
2 research, and outcomes of each cesspool system
3 demonstration project; and

4 (4) Establish a ranking system similar to the Hawaii
5 cesspool prioritization tool for the islands of
6 Molokai, Lanai, and Niihau.

7 (c) The University of Hawaii water resources research
8 center shall submit an annual report to the legislature no later
9 than twenty days prior to the convening of each regular session
10 for the duration of the pilot program. The reports shall
11 include:

- 12 (1) Information on the new wastewater and cesspool
13 technology systems reviewed and implemented;
- 14 (2) Cesspools converted pursuant to the pilot program;
- 15 (3) The costs incurred to convert each cesspool;
- 16 (4) Recommendations on how to improve the efficiency of
17 the pilot program;
- 18 (5) Whether the pilot program should be made permanent;
19 and
- 20 (6) Any other recommendations the University of Hawaii
21 water resources research center deems appropriate.



1 (d) The pilot program shall cease to exist on June 30,
2 2026.

3 SECTION 3. There is appropriated out of the general
4 revenues of the State of Hawaii the sum of \$3,025,468 or so much
5 thereof as may be necessary for fiscal year 2023-2024 to
6 implement the new waste management solution and cesspool system
7 demonstration pilot program established pursuant to this Act.

8 The sum appropriated shall be expended by the University of
9 Hawaii water resources research center, in cooperation and
10 consultation with the department of health, department of
11 Hawaiian home lands, and the University of Hawaii college of
12 engineering for the purposes of this Act.

13 SECTION 4. There is appropriated out of the water
14 pollution control revolving fund the sum of:

15 (1) \$56,304 or so much thereof as may be necessary for
16 fiscal year 2023-2024 and the same sum or so much
17 thereof as may be necessary for fiscal year 2024-2025
18 to fund one full-time equivalent (1.0 FTE) engineer
19 position within the department of health's wastewater
20 branch; and




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1 (2) \$52,044 or so much thereof as may be necessary for
2 fiscal year 2023-2024 and the same sum or so much
3 thereof as may be necessary for fiscal year 2024-2025
4 to fund one full-time equivalent (1.0 FTE) planner
5 position within the department of health's wastewater
6 branch.

7 The sums appropriated shall be expended by the department
8 of health to support approval of individual wastewater systems
9 applications.

10 SECTION 5. This Act shall take effect on July 1, 2023.

11

INTRODUCED BY: _____



S.B. NO. 285

Report Title:

Cesspools; New Waste Management Solution and Cesspool System Demonstration Pilot Project; Report; Appropriation

Description:

Establishes a three-year New Waste Management Solution and Cesspool System Demonstration Pilot Program within the University of Hawaii Water Resources Research Center to examine and demonstrate new wastewater and cesspool technology systems; implement those technologies in demonstration projects in areas across the State that are identified as Priority Level 1 in the 2021 Hawaii Cesspool Hazard Assessment and Prioritization Tool Report; and establish a similar ranking system for prioritization levels for the islands of Molokai, Lanai, and Niihau. Requires the University of Hawaii Water Resources Research Center to submit reports to the Legislature. Appropriates funds for the pilot program. Appropriates funds for one full-time equivalent (1.0 FTE) engineer position and one full-time equivalent (1.0 FTE) planner position within the Department of Health's Wastewater Branch to support approval of individual wastewater systems applications.

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